

**Notice of Allowability**

Application No.

10/728,849

Applicant(s)

KANG, HEE BOK

Examiner

Nam T Nguyen

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on 12/08/03.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ The drawings filed on 08 December 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 4/26/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other EAST search.



**RICHARD ELMS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**

**DETAILED ACTION**

***REASONS FOR ALLOWANCE***

1. Claims 1-13 are allowed.

The following is an examiner's statement of reasons for allowance:

There is no teaching or suggestion in the prior art to:

“ a timing data sensing unit for sensing a sensing value of the sense amp unit by using timing of the sensing voltage of the pulled-up data bus to reach the sensing threshold voltage, and for outputting the sensing value to a data buffer” as claimed in the independent claim 1; or

“ a timing data register array unit connected to the common data bus, for sensing the read data and outputting the write data to the common data bus, wherein the timing data register array unit senses the read data by using timing of a sensing voltage of the common data bus to reach a sensing threshold voltage” as claimed in the independent claim 4; or

“ the data sensing method using timing reference which senses data values of the common data bus by using different timings of sensing voltages of the common data bus corresponding to different data values to reach a sensing threshold voltage, respectively” as claimed in the independent claim 10; or

“ a first step for calculating first timing and second timing of sensing voltages of the common data bus to reach a sensing threshold voltage by sensing the voltage of the sub bit line; a second step for sensing the sensing voltages of the common data bus;

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and a third step for storing and outputting the values sensed between the first timing and the second timing" as claimed in the independent claim 11.

2. The following prior art, which is considered pertinent to applicant's disclosure although not relied upon, includes:

Ting (US Pat. No. 5,563,831) or Bloker (US Pat. No. 6,172,925) disclose timing reference circuit for memory array similar to that of the present application, but fail to disclose as described above.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam T Nguyen whose telephone number is (571) 272-1878. The examiner can normally be reached on 8 am to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nam T Nguyen  
Examiner  
Art Unit 2824

10/06/04

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